UWIN Utah Wireless Integrated Network

Technology Steering Committee

MEETING MINUTES

Friday January 21, 2005
10:00am
St. George P.D.
200 East 265 North

Attendance:

Rick Bailey (San Juan County)	Jeff Dial (St. George City)
Alan Freestone (San Juan County)	Robert Allinson (Cedar City)
Bryan Low (Logan City)	Merv Gustin (Duchesne County)
Dave Raab (National Guard, MARS)	Doug Chandler (State ITS)
Trevor Pollock (State ITS)	Forrest Roper (Millard County)
Jim Lloyd (State DPS)	Nancy McConnell (State ITS)*
Boyd Webb (State ITS)	Tim Cornia (State DPS)*
Floyd Ritter (State ITS)	Lloyd Johnson (State DNR)*
Jake Hunt (UCAN)	

** Teleconferenced*

I. Approval of Minutes

The December 2004 minutes were approved without change.

II. Narrowband Migration

Boyd Webb went through a PowerPoint presentation addressing the latest issues relative to the narrowband process. The Narrowband Migration Team goals are:

- Become a clearinghouse of information relative to narrowband migration
- Help agencies understand impact of FCC's regulatory actions.
- Conduct technical evaluations of wideband and narrowband systems (combinations)
- Develop best practice standards
- Create a narrowband migration strategy
- Publish a narrowband migration plan

In December 2004, the FCC made changes in Docket 99-87, 3rd Report and Order. The latest iteration established the following:

After Jan 1, 2011:

- The FCC will no longer accept new applications for operations using WB channels in the spectrum below 512 MHz.
- The FCC will no longer accept modification applications (changing a current license) for wideband channels.
- The FCC will prohibit the certification of any equipment capable of operating wideband

Previously the FCC had the above steps spread around several different dates. The new 'drop dead' date (must be completely operating in narrowband) is Jan 1, 2013.

Boyd presented information relative to where frequencies are used around the state. Washington and Cache County are the most difficult regions to obtain new frequencies. In the UHF band, the frequencies have been pre-allocated into channel pairs. The VHF band does not have channel

pairing, so interference is far more likely and frequent. The FCC has mandated migration, but not refarming. This means agencies can simply re-license their current wideband frequencies to narrowband, but without any effort to refarm, there is nothing gained. The frequency coordinators are reluctant to follow a *voluntary* refarming plan that will tie their hands. If a frequency coordinator is asked to provide a frequency pair, and there are no pairs available in the voluntary plan, then they will grab whatever pair they can outside of the plan, thus defeating the overall purpose of a refarming plan.

The 2013 deadline only takes us to what the FCC considers an *intermediate* deadline. It takes us to 12.5KHz channels. At some future date the FCC is going to hand out another deadline for migrating again to 6.25 channels. The 6.25KHz channels will be digital-only, so whatever you are spending to migrate to 12.5 KHz will not cover the migration to 6.25 KHz.

Expect losses when going from wideband to narrowband (either step). The exact % of reduced coverage is not really known. Boyd has done some computer coverage simulations that suggest approximately a 20% loss.

Strategy #1: Re-license current frequencies in narrowband. This option is by far the least expensive.

Strategy #2: Reband the VHF spectrum (Ritter Plan)
If agencies throughout the state plan to stay in VHF long-term, then we need to look at this option. This will require a wide consensus among all coordinators – preferably an FCC mandate.

Strategy #3: Migrate away from VHF altogether and move to 700 and 800 MHz bands. It's not cheap or easy, but this is where future technologies will be found.

Doug Chandler noted that many years ago, a governor's task force was put together to address the differing frequency bands that public safety agencies were operating in. The conclusion of the task force was basically two-fold: Everyone should be operating in a single frequency band; and that band should be 800MHz. This was the basis for the creation of UCAN. Doug asked the question (directed primarily toward the rural regional representatives): Why, after almost two decades, are we not all together on 800MHz?
Some answers were given (as close to verbatim as can be made out on the recording):

- "Cost too dang much."
- The current VHF infrastructure works well where it's at today.
- If VHF trunking were available when the decision was made to go to 800MHz, would we be in VHF or 800?
- We will probably never have enough people [in our region] to justify trunking.

Jake pointed out that VHF trunking was looked at. There was no possible way to smoothly transition the Wasatch Front to VHF trunking. Jake pointed out that the costs to trunk VHF were significantly more to trunk in VHF than in 800MHz. Public Safety radio, and the technology that is coming out, will be in 700 and 800 MHz.

Floyd Ritter pointed out that there are areas in the country where there are not enough available frequencies in 800MHz either. That's why so many regions of the country petitioned the FCC to set aside the new 700MHz spectrum. Many states are going VHF trunking: Wyoming, Virginia, South Dakota, Montana.

Doug pointed out that we can create a beautiful plan to all meet together on 700MHz in 20 years, but unless the rural areas are kicked off VHF…will they ever really move to 700MHz? The immediate reply was: "Is there money to do it?" It always comes down to the business case. Rick Bailey said that 11 non-Utah state counties that are all running on VHF surround San Juan County. That's an important point to factor in. Floyd pointed out that the fed's are all running on VHF.

OmniLink was discussed. Dave Raab with the Utah National Guard, noted the success of the OmniLink project with respect to several recent operations. Jake said that we have not yet used OmniLink. We have been patching through the audio switches of two zones, but the actual OmniLink software has not yet been turned on. There was some general confusion that was discussed about the difference between the Motorola software called "OmniLink" and the larger connectivity project that was put together, that we are unofficially calling "OmniLink".

Doug asked for specific direction for Boyd, with respect to narrowband migration, which can be taken to the Governance Board of UWIN. Floyd said that NPSTC is putting the "Ritter Plan" in front of the national agenda on the 14th and 15th of February. Until the FCC mandates something, it will not happen if left to the coordinators alone. NTIA's position in working with the FCC will also determine what will happen nationally.

Boyd felt that we would probably not ever come to a full-blown consensus. There are areas of the state where it doesn't make sense to refarm. Boyd suggested that it makes more sense to move to 700MHz narrowband now than to take the several steps between VHF wideband, to VHF transition (12.5 Kc channels), to VHF narrowband (6.25 Kc). We have an opportunity to set a direction now, or we will be having these same discussions in another 20 years. Boyd said that he could not recommend to Washington County that they stay in VHF. There is no more room for the very necessary growth in that band. Jeff Dial stated that we should find a hybrid solution that will work statewide where areas can more easily migrate to different frequencies and technologies. This is what OmniLink is accomplishing.

Chief Allinson, Cedar PD, said that Cedar City's VHF dispatch and radio infrastructure is funded by the state. To migrate, Cedar City PD would have to start it's own dispatch center. Doug Chandler pointed out that many areas of the state are VHF because the state is funding that technology.

III. Wireless Ethernet

Tim Cornia asked if the Wireless Ethernet Project should be working on a security policy, or should we just be working on a standards document? Tim will schedule a meeting next week to get opinion on what is being written. It is a very high-level document that would reference a standards document. The ITS document notes a database that would encompass all access points on the WAN. Access points that are not meeting standards, or are not on the database would be shut off. Another thing that would be addressed in the standards document would be security. One thing that has to be addressed with respect to security is cost. Open-source solutions would

be preferable, and should work with solutions that have already been deployed. The meeting next week will result in a final draft that will be brought to the next UWIN TSC meeting. The University of Utah has published a couple of documents 'Wireless Network' and 'Decentralized Scalability with 802.1x'. These are very well written documents that need to be reviewed by the Project Team. The UofU is working towards an authentication mesh. Tim may ask the UofU to come and meet with us.

The CIO's office stated that input from IT directors is not required prior to setting policy, but there was a small sub-committee of IT directors that was set up to review policy for purposes of feedback. Mike Sobourin with the UofU is working with DPS and ITS to connect 802.11 and the new 700MHz mobile data project.

IV. Mobile Data

Forrest Roper handed out a map reflecting the current status of the 700MHz mobile data project. There are two sites installed and operation in the Basin area. Getting base stations faster from the manufacturer is the biggest need right now. The Basin has been getting mobile radios. The DPS order of 200 mobiles is complete. Several initial problems have been successfully addressed. There is a small problem with switching between base stations of differing frequencies. The basin is being deployed on a single frequency, so that region is not affected by this problem.

The next round of funding by DPS should cover most of the rest of the state. Most of the sites that have been approved are just waiting for stations. Site arrangements are still being made.

V. OmniLink

Vernal is operational. Box Elder will be in February. Grand now has console equipment and is waiting for connection. San Juan is still receiving equipment. Phil asked Rick for about a month's notice for circuit installation.

VI. St. George Floods – Communications Lessons Learned

Jeff Dial reported on the recent floods in Washington County. 4 of the 5 county communications sites went down. Seegmiller was the only site that was still operational. The tower at Flat-Top was broken in two due to ice-loading. A portable repeater was deployed. One of the lessons learned was to accept whatever is offered. UCAN offered equipment that was declined, but it was later recognized that it could have been put to use.
The OnmniLink solution was valuable in working with the National Guard. They were pre-staging in the region, and communicating with their EOC in Salt Lake. St. George City utilities personnel use Nextel. Had that network failed, they would have been in trouble.

VII. Next Meeting

Friday, March 18, 2005
10:00 am - noon
Logan City PD
290 North 100 West

Phone Bridge: 1-877-581-9247
Participant Code: 604370